

In re the Application of:
Alan C. Wendt et al.
Application No. 10/810,787
Response to Office Action of January 22, 2007

REMARKS

Claims 1-46 are pending. Claims 1, 9, 17 and 25 were amended to replace to the term "supportable" with the term "supported" in claim 1, replace the phrase "adapted to be supported" with the term "supported" in claim 9; remove the phrase "adapted to be" before "substantially concealed" in claim 17 and replace the phrase 'adapted to be' with the term "being" in claim 25 to positively recite that the panel is supported in these claims. Claim 25 was also amended to replace the term "panel" with the term "system" as suggested by the Examiner.

Claims 1, 9, 17 and 25 have also been amended to require that the non-woven fabric is "a sound absorbing barrier" attached to the first face surface to cover the apertures. Support for this can be found for example in paragraph [00029].

New Claims 47-50 are supported at page 9, paragraph [00030].

It is respectfully submitted no new matter is presented by the above amendments.

I. Claim Objections

All of the pending claims have been objected to because of the following alleged informalities. The Office Action asserts "[A]ll of the independent claims currently have language equivalent to 'adapted to be' or able to be supported from a structure" and "this is not a positive limitation but merely requires the panel to be able to be supported." In response, applicants amended claims 1, 9 and 25 to positively recite the panel is supported and amended claim 17 to recite the "the interior face is ~~adapted to be~~ substantially concealed."

Claim 25 has also been objected to for use of the phrase "the panel comprising." Claim 25 was amended to recite "the system comprising" in accordance with the Examiner's suggestion.

Applicants' respectfully submit the amended claims overcome the informalities noted in the Office Action. Applicants therefore request the objection to the pending claims be withdrawn.

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II. 35 USC §103(a)

All of the pending claims 1-46 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the primary reference to Ashton (US 4706422) in view of Lynch et al (US 2003/0046889) and Saylor et al (US 4084367).

A. Claims 1, 3-6 and 8

Claims 1, 3-6 and 8 (and at page 4 of the Office action, dependent claim 2; and at page 5 of the Office action, dependent claim 7) have been rejected under 35 U.S.C. §103(a) over Ashton in view of Lynch et al and Saylor et al. The Office action has cited Ashton with respect to claim 1 for disclosure of a durable sound absorbing panel having surface burning resistance qualities for use in a structure having an environmental area when installed. The Ashton panel substrate includes a plurality of apertures (2 in figure 2) spread across the surface of the panel substrate to extend from the first face to the second face (column 2 lines 14-15); a fibrous material (26 in figure 3) attached to the first face of the panel substrate and applied such that the apertures are covered by the fibrous material, the fibrous material is positioned such that nearly complete exposure of the material occurs when installed, permitting viewing from the environmental area of the structure (as is evidenced by the figures).

The Office action notes the disclosure of the panel in Ashton does not teach the panel is supportable (or supported) from a structure and the Ashton is silent as to the nature of the fibrous material over the exterior surfaces of the panel. However, the Office Action asserts Lynch et al discloses a panel having a non-woven fibrous layer (24 in figure 2) and a perforate panel substrate supported from a structure (figure 1), and it would be obvious to one skilled in the art to combine the teaching of Lynch et al to suspend the Ashton panel from the Lynch et al structure.

The office Action also asserts Saylor et al discloses a panel having a non-woven material (141 in figure 8) as the exterior viewable surface covering a sound absorbing panel and it would have been obvious to one of ordinary skill in the art to combine the teaching of Saylor et al to use

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a non-woven material of Saylor et al to cover the panel of Ashton in the structure of Lynch et al and have the non-woven material layer be visible.

The Office action asserts the motivation for using a non-woven material would have been to impart a degree of decorative appearance to the panel of Ashton in view of Lynch et al. The Office action also asserts it would be a matter of obvious design choice to select a known material on the basis of its suitability for the intended use.

This rejection is respectfully traversed.

1. It is improper to combine Ashton and Lynch et al and Saylor et al
 - i. It is improper to substitute the thin fabric of Saylor et al for the fabric bag of Ashton

Ashton, at Column 1, line 66 through Column 3, line 8, teaches a panel including sound transmitting side walls 1 and 8 having channels with apertures, rigid internal stiffeners forming cavities 6, and acoustic bats 7 in the cavities 6 to form a middle sound eliminating "layer" between the side walls. The side walls are held together by upper and lower lock members to form a sealed assembly which has an acoustic infill panel formed by the bats 7 and which has the required rigidity because of stiffeners 4 and 5 (Ashton, col. 2, lines 25-28).

The outer fabric covering 26, which may be a wool fabric, is described as being in the nature of a bag which can be pulled over the formed panel. The open mouth 27 of the fabric cover is pulled inwardly and caught over tangs 16 so that the fabric is held in a taut position to entirely cover the panel and yet be removable by releasing from the tangs if at any time this is required (Ashton, col. 2, line 66 - col. 3, line 18).

It is improper to replace the fabric cover bag of Ashton. The fabric cover bag is formed independent of the panel and tensioned to hold the structure together but purposely not glued or permanently attached to the panel to be removed for cleaning, etc. (see Col. 1, lines 41-45 and column 3 lines 27-33).

Also, Ashton, col. 3, lines 27-28 states, "The whole structure is also held firmly together by the fabric cover 26 when it is drawn in place...." Thus, the cloth bag in Ashton serves a

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structural function to strengthen the panel while allowing sound penetration through the apertures in the side walls 1 and 8 into the acoustic bats in the internal cavities of the acoustic in-fill panel.

To replace the woven wool cloth fabric of Ashton with the thin fabric 41 of Saylor et al, col. 6, line 55, or the paper or fabric light diffusing layer 24 of Lynch et al would render the strengthening function of the Ashton fabric bag inoperative.

Thus, there is no teaching or motivation for one skilled in the art to make the proposed combination of Ashton with either Lynch et al or Saylor et al.

ii. It is improper to place the Ashton Panel into the Structure of Lynch et al

Ashton discloses a space divider which is generally self-supporting (column 1, lines 1-5). It is not a ceiling panel and not intended to be supported by a ceiling system. For use as a floor panel it is provided with a lower lock member 12 with downwardly projected tangs 16. Putting it in a ceiling renders it inoperative for its intended purpose.

2. Neither Saylor et al nor Lynch et al make up for Ashton's silence about the bag fabric material's nature with respect to weaving

Present Claim 1 recites, "a non-woven fibrous material attached to the first face of the panel substrate and applied such that the apertures are covered by the non-woven fibrous material." The Office action asserts Ashton is silent about the bag fabric material's nature with respect to weaving.

The Office action asserts "Saylor discloses a panel having a non-woven material (141 in figure 8) as the exterior viewable surface covering a sound-absorbing panel." Saylor et al, col. 4, lines 8-12, discloses the skins are covered by a layer of sound absorbing fibrous material such as a layer of fiberglass. When fiberglass or any proposed equivalent is utilized for this outer layer, then the fiberglass layer in turn is covered by a thin layer of decorative fabric (see also, Saylor et al, col. 6, lines 53-56).

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Applicant respectfully submits Saylor et al does not state the "thin fabric" 41, 141 is non-woven. Applicant submits the likelihood is much higher that the fabric 141 is woven due to its use over non-woven fiberglass.

Thus, if the Examiner continues to assert "thin fabric" 41, 141 is non-woven, then Applicant respectfully requests the Examiner indicate where Saylor et al specifically teaches the thin fabric is non-woven.

The Lynch et al non-woven top layer is irrelevant because it is employed for light diffusing in a moiré panel (Lynch et al, paragraph [0025]. This purpose is irrelevant to the present invention, Saylor et al and Ashton. Moreover, the Lynch et al non-woven top layer is purposely hidden from view.

Thus, neither Saylor et al nor Lynch et al make up for Ashton's silence about the bag fabric material's nature with respect to weaving.

3. Saylor et al Does Not Attach its Thin Fabric Layer to its Metal Facing Sheet

Even if the layer of fabric was non-woven (which Applicant is not admitting), it is not the layer attached to the metal facing sheet 122. See, for example, Saylor et al, Col. 10, lines 14-15, "This fiberglass layer 124 is then suitably covered by a thin fabric covering 141." Similarly, Saylor et al, Col. 6, lines 52-56, discloses a fiberglass layer 39 substantially completely covered by an outer covering 41 to provide a decorative appearance.

The layer of thin fabric 141 of Saylor et al is not attached to metal facing sheet 122 having the holes. The fiberglass non-woven layer 124 of Saylor et al is on the metal facing sheet 122 to control sound flow and cover the apertures created by the metal skin layer that communicate with the honeycomb cell for sound control.

Moreover, Present Claim 1 recites, "the non-woven fibrous material is positioned such that nearly complete exposure of the material occurs when installed, permitting viewing from the environmental area of the structure." The non-woven fibrous material of Saylor et al would be fiberglass layer 124 which is hidden from view. The fiberglass non-woven layer 124 of Saylor et

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al is not intended to be substantially completely exposed to the environment because it does not provide a decorative layer.

4. Lynch et al Does Not Make Up For the Deficiencies of Ashton

Lynch et al discloses a ceiling system for diffusing light from the structure above the ceiling panel through a light diffusing layer 24 in figures 1-3. The light diffusing layer can be an acoustical sound backer fabric. The light diffusing layer is used to cover apertures in the top side of upper layer 20 (secured by use of an adhesive) to give a moiré lighting effect and conceal the building structure above the ceiling panel. While the layer 24 can be attached to the bottom side 50 of the upper panel 20, this arrangement is not preferred since it reduces the moiré effect (see paragraph 0025).

Moreover the ceiling system, as installed with a surface exposed to the environment, is an assembly of both the upper layer 20 and the lower layer 22 where the light diffusing layer 24 is always disclosed in Lynch et al as being above the top surface of the lower level 22 and the apertures in the lower layer 22 would be exposed to the environment in its final panel assembly.

Thus, even if one sought to use the light diffusing fabric layer 24 of Lynch et al in the panel of Ashton, Lynch et al does not teach the use of the non-woven fabric on the surface of the panel exposed to the environment and covering the apertures of the surface exposed to the environment as required in claim 1.

4. Claim 2 Further Distinguishes Over the References

Claim 2 recites the non-woven fibrous material is attached to the first face of the panel substrate with an adhesive.

It is improper to glue the fabric cover bag of Ashton. The fabric cover bag is formed independent of the panel and tensioned to hold the structure together but purposely not glued or permanently attached to the panel to be removed for cleaning, etc. (see Col. 1, lines 41-45 and column 3 lines 27-33). Gluing the fabric bag of Ashton renders it inoperative for the purpose of its being removable.

5. Claim 7 Further Distinguishes Over the References

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Claim 7 recites the panel has flanges for connection to a suspended ceiling grid.

Lynch et al is relied upon for the use of a light diffusing non-woven fabric layer over a layer with apertures spread across its surface for the passage of light through a ceiling panel in which the ceiling panel system has at least two side edges each having a flange for connection to a suspended ceiling grid wherein suspended ceiling grid includes a plurality of grid members interconnected to form panel openings, the grid members being suspended from the structure with hangers.

The Office action acknowledges the panels of the combined combination of Ashton and Saylor et al do not disclose the use of side edges each having a flange for connection to a suspended ceiling grid. However, the Office action asserted it would be obvious to combine the ceiling panels of Lynch et al with the panels of Ashton and Saylor et al for a ceiling panel system that has the flanged edges and grid members suspended to the structure with hangers.

As stated above, the proposed combination of Ashton and Saylor et al and Lynch et al does not make base claim 1 obvious.

Moreover, Ashton discloses a space divider which is generally self-supporting (column 1, lines 1-5). It is not a ceiling panel and not intended to be supported by a ceiling system. Putting it in a ceiling renders it inoperative for its intended purpose. Thus, it is improper to use this as a reference against Claim 7.

Moreover, it is respectfully submitted, there is no suggestion that the proposed panels of Ashton and Saylor et al are intended for use in a system wherein the non-woven decorative layer would be disposed to be completely exposed to the environment through use of a horizontal grid with the panels having a flange for connection to the suspended ceiling grid.

B. Claims 9-16

Claims 9-16 have been rejected under 35 U.S.C. 103(a) over Ashton in view of Lynch et al and Saylor et al.

As stated regarding present Claim 1, it is improper to combine these references, and neither Lynch et al nor Saylor et al make up for the deficiencies of Ashton.

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Also, Claim 10 recites the non-woven fibrous material is attached to the first face of the panel substrate with an adhesive. Thus, it is further improper to cite the references against it as explained above for Claim 2.

Also, Claim 14, recites the panel has flanges for suspending the panel from a ceiling grid, so it is further improper to cite the references against it as explained above for Claim 7.

C. Claims 17-24

Claims 17-24 have been rejected under 35 U.S.C. 103(a) over Ashton in view of Lynch et al and Saylor et al.

As stated regarding present Claim 1, it is improper to combine these references, and neither Lynch et al nor Saylor et al make up for the deficiencies of Ashton.

Also, Claim 18 recites the non-woven fibrous material is attached to the first face of the panel substrate with an adhesive. Thus, it is further improper to cite the references against it as explained above for Claim 2.

Also, Claim 22, recites the panel has flanges for suspending the panel from a ceiling grid, so it is further improper to cite the references against it as explained above for Claim 7.

D. Claims 25-34

Claims 25-34 have been rejected under 35 U.S.C. 103(a) over Ashton in view of Lynch et al and Saylor et al.

Claim 25-34 recite a ceiling system.

Ashton discloses a space divider which is generally self-supporting (column 1, lines 1-5). It is not a ceiling panel and not intended to be supported by a ceiling system. Putting it in a ceiling renders it inoperative for its intended purpose. Thus, it is improper to use this as a reference against Claim 25.

Moreover, the Ashton panel locates the sound eliminating “layer” of acoustic bats 7 between the side walls which have a plurality of apertures. Therefore, the sound eliminating “layer” of acoustic bats 7 would be above the lower side wall when the panel is installed on top

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or the side opposite the environmental view side when the panel is installed in a ceiling system. There is no teaching in Aston that the fabric “bag” has any acoustical barrier properties. Moreover, the Aston fabric “bag” is not apparently used as a sound barrier in view of the use of the acoustic bats in the interior of the two side walls as a sound barrier. Replacing the acoustic layer of Ashton with the fabric layer of Lynch et al would still result in the acoustic layer being between the side walls and not adhesively attached to the surface viewed by the environment and, thus, falls outside the claims.

Replacing the removable pull-over fabric cover 26 of Ashton with the fabric layer of Saylor et al would still locate the sound eliminating acoustic bats 7 in cavities 6 between the side walls 1 and 8 that have the apertures and the fabric layer and, thus, falls outside the claims.

Moreover, replacing the acoustic bats of Ashton with only the non-woven (fiberglass) layer of Saylor et al, would not be obvious because Saylor et al teaches use of the fabric layer as a cover over the fiberglass layer. This proposed combination would also result in the replacement of the sound eliminating bats in Ashton with a fiberglass layer and would still result in having the side wall with the apertures being between the non-woven fiberglass layer and the fabric.

Also, Claim 26 recites the non-woven fibrous material is attached to the first face of the panel substrate with an adhesive. Thus, it is further improper to cite the references against it as explained above for Claim 2.

E. Claims 35-46 Further Distinguish Over the References

Claims 35-46 have been rejected under 35 U.S.C. §103(a) over Ashton in view of Lynch et al and Saylor et al.

With respect to Claims 35-46, the Office action asserts Lynch et al discloses (paragraph 23) that the panel substrate is self-supporting and made from metal.

It is respectfully submitted these claims are non-obvious in view of the cited references at least for the reasons presented above regarding their base claims.

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III. Conclusion

It is respectfully submitted all objections and/or rejections are overcome. Thus a Notice of Allowance is respectfully requested.

Please charge any fee deficiencies or credit any overpayments to Deposit Account No 10-4375.

Respectfully submitted,

/anthony p venturino/

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Anthony P. Venturino
Registration No. 31674

APV/KVW
ATTORNEY DOCKET NO.: **APV31875/3632**
STEVENS, DAVIS, MILLER & MOSHER, L.L.P.
1615 L STREET, N.W., SUITE 850
WASHINGTON, D.C. 20036
TEL. 202-785-0100 / FAX. 202-785-0200